Identifying best practices in interstage care: using a positive deviance approach within the National Pediatric Cardiology Quality Improvement Collaborative
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About this study

Why is this study important?
- Many babies born with a damaged or under-developed heart ventricle have three different heart surgeries during their first few years, usually called staged surgeries. The time between the first surgery (called stage 1 or the Norwood Procedure) and the second (stage 2 or Glenn palliation) is called the Interstage Period.
- One of the most important goals of people caring for babies with single ventricle heart defects such as HLHS is to reduce the number of deaths in the Interstage Period, between the first and second heart surgeries. This is one of the reasons why the National Pediatric Cardiology Quality Improvement Collaborative (NPC-QIC) was formed.
- If we learn more about what the kind of care is being done during the Interstage Period by hospitals which have the lowest death rates, other hospitals could copy those best practices and reduce deaths.

How was this study performed?
- The researchers started by creating a questionnaire and then interviewing staff at 4 hospitals with relatively higher death rates and 7 hospitals with relatively lower death rates. Then they compared the results to see what kind of practices seemed likely to affect death rates.
- A new questionnaire was created using what had been learned from the first round. This new questionnaire was sent to 36 other hospitals.

What was the goal of the study?
- To find out if particular ways in which the best hospitals took care of kids during the interstage period might be linked with lower death rates.
- To find out about differences in how hospitals manage the interstage period.

What were the results of the research?
There were 20 potential best practices identified and then analyzed across the 36 centers. Of these 20, only one was found likely to make a difference in death rates.

- How often the care team talked officially with each other about the results of their surgery and follow-up care.
- Most of the hospitals with relatively lower death rates talked officially at least once a month, and hospitals with higher death rates talked officially less often.

What are the limitations of this study?

- The number of centers contributing patients is still relatively small and each sites’ focus on improvements over time makes identifying best practices difficult.
- Changes to practice over time cannot be accounted for in this analysis since data was collected at only one time point.
- This study only includes patients that were discharged following stage I Norwood surgery and does not include patients that were never discharged from the hospital or died following stage 1.

What it all means

- There was only one practice that seemed to be related to lower death rates.
- We learned that the staff at hospitals with relatively lower death rates talked with each other more often in formal or official meetings about the results of interstage care.
- Hospitals where the staff met to talk about their results four times a year had more deaths than hospitals where the staff talked every month.
- This study suggests that when people on a health care team discuss their results more frequently, they look for better ways of taking care of their patients and families.